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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICANT: PANNEKEET
SERIAL NO.: 10/681,826
FILED: OCTOBER 8, 2003
TITLE: METHOD AND APPARATUS FOR MANUFACTURING A BAG PACKAGE, AND BAG PACKAGE

EXAMINER: TRUONG
ART UNIT: 3721
CONFIRMATION NO.: 6619

Mail Stop: APPEAL BRIEF
Board of Patent Appeals and Interferences
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPEAL BRIEF

Dear Sir:

In regard to the above referenced application, Appellant submits this Appeal Brief.

I. REAL PARTY IN INTEREST

The real party in interest is Jarsan Beheer B.V., a corporation of the Netherlands. Jarsan Beheer B.V.'s right to take action in the subject application was established by virtue of the following chain of title:

1. An Assignment from the inventor, Petrus Clemens Maria Pannekeet, recorded at Reel 014883, Frame 0043, to Jarsan Beheer B.V.

II. RELATED APPEALS AND INTERFERENCES

The undersigned legal representative of Appellant hereby confirms that there are no known appeals or interferences relating to the present application, or any parent application, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

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III. STATUS OF THE CLAIMS

Claims 1-8 are pending in the application. Of the above claims 7 and 8 have been withdrawn from consideration in response to a restriction requirement. No claims have been allowed. Claims 1-6 stand rejected under a final Office Action mailed June 23, 2005.

The rejections of each of the claims 1-6 are being appealed.

IV. STATUS OF THE AMENDMENTS

No amendments have been made to claims 1-6. Claims 1-6 are pending as originally filed. The claims 1-6 set forth in section VIII reflect the claims pending.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention is a method of manufacturing bag packages from netting material and at least two printed foil overlay strips. The packages manufactured according to Applicant's method are of the type commonly used to package flower bulbs, potatoes, onions or similar products. None of claims 1-6 have means plus function or step plus function elements as permitted by 35 USC §112, sixth paragraph.

Applicant's Claim 1 states in its entirety:

"A method for manufacturing bag packages, wherein netting material of bags to be formed is connected to at least two foil strips which are each provided with a printing pattern repeating in a longitudinal direction of the foil strip, characterized in that the foil strips are supplied in a coupled manner from one foil stock."

Thus, the following elements are required to perform the method of claim 1:

a) A base netting material of bags to be formed must be provided. (See ¶ 2, ¶ 35-36 and element 8, Figs. 3-4.)

b) This bag/netting material must be connected to at least two foil strips. (See ¶ 12, 37-38 and elements 12A and 12B, Fig. 2.)

c) Each foil strip must have a printed pattern repeating in a longitudinal direction along the foil strip. (See ¶ 37, elements 12A and 12B, Fig. 5.)

d) The printed foil strips must be supplied in a coupled manner from one foil stock. (See ¶ 37, elements 12A and 12B, Fig. 5.)

A typical bag manufactured according to Applicant's claimed method is illustrated in Figs. 3 and 4. It is critical to an understanding of the scope of Applicant's claims to note that any bag manufactured according to Applicant's methods will include three separate structural components. A bag of netting material (element 8 of Fig. 4) and at least two foil strips which are typically attached to the front and back of the bag of netting material and each of which foil strips is provided with a printed pattern or illustration (elements 12A and 12B of Fig. 4). Each of claims 1-6 is limited to methods of manufacturing label bearing bags from each of these three structural elements.

A critical final element of claim 1 is that each of the at least two foil strips are supplied in a coupled manner from one foil stock (see Fig. 5). This step distinguishes the claims of the present application from the prior art. The provision of both a front and back illustrated full strip from one foil stock eliminates a front and back illustration mismatch problem inherent in the prior art. In particular, a bag prepared according to prior art methods featuring separate rolls providing separate front and back foil sheets as overlays can cause an illustration mismatch over time due to slight variations in the supplied length of each of the front and back foil panels. The front and back illustration mismatch problem has been addressed in the prior art by precisely placing each front foil using an optically read index mark and sizing the illustration or text block on the back panel small enough to allow each bag to have at least one complete back image along with other partial back images regardless of where along the length of the back foil it is attached to the bag. Alternatively, both the front and back panels could be precisely placed using optically read index marks. However, such a solution would result in a substantially more expensive and complicated process. According to Applicant's method, by applying the two foil strips from one coupled foil stock, the image on the back strip remains longitudinally matched with the image on the front strip up the point in time where the stock is split and the two panels are bonded to the net bag. Accordingly, Applicant's invention lies in a novel and non-obvious method of manufacturing a bag package by bonding more than one suitably illustrated foil strip provided from coupled stock to a net bag.

Dependent claims 2-6 recite further aspects of the method of Applicant's invention. In particular, claim 2 adds that the foil strips are obtained from a foil stock which is a single strip of foil provided with at least two repeating printing patterns. Concurrent repeating patterns may be provided next to one another such that when the single strip is divided into sub strips, each bears a separate repeating printed pattern. Support for these elements may be found at paragraph 37 and in Fig. 5, elements 12A and 12B.

Claims 3-6 further provide that the single foil strip be obtained from a stock roll and that the stock roll be unwound by foil webs moving along with the netting material of claim 1. (See ¶ 38 and stock roll 11, Figs. 1-2.) In addition, as recited in claim 5, at least one of the sub strips divided from the single strip will be connected to the bag in a flat condition (¶ 38). Alternatively, as recited in claim 6, at least one of the sub strips may be connected to a flat strip of the netting material in an overlapping manner across only a part of the width of the netting material (¶ 38).

VI. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

Claim 1 stands rejected under 35 USC § 103(a) as being unpatentable over Pannekeet, WO 99/14121, in view of Kurth, U.S. Patent No. 6,658,818.

Claims 2-6 stand rejected under 35 USC § 103(a) as being unpatentable over Pannekeet, WO 99/14121, in view of Kurth, U.S. Patent No. 6,658,818 and further in view of Antonacci, U.S. Patent No. 5,823,683.

VII. ARGUMENT

A. Summary of the Argument

Each of Applicant's claims 1-6 stands rejected as unpatentably obvious over Pannekeet in view of Kurth, and in the case of claims of 2-6, further in view of Antonacci. Applicant argues that the foregoing references do not provide suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the references or to combine the referenced teachings to arrive at Applicant's claimed invention. Furthermore, the prior art references, when combined, do not teach or suggest all of the recited claim limitations. Therefore, the Examiner has failed to demonstrate the essential elements needed to support a *prima facie* obviousness rejection of claims 1-6. Accordingly, Applicant submits that claims 1-6 have been improperly rejected. Applicant's arguments are set forth in detail below.

B. The Rejection of Claim 1 under 35 USC § 103(a)

1. Statement of the Relevant Law Pertaining to 35 USC § 103(a)

The proper standard for rejection of claims under 35 U.S.C. § 103(a) is whether the differences between the claimed subject matter and the prior art are such that the claimed subject matter would have been obvious to one of ordinary skill in the art at the time the invention was made. In evaluating whether or not an invention is obvious, inquiry into the following three factors must be made:

1. The scope and content of the prior art;
2. The level of ordinary skill in the prior art; and
3. The differences between the claimed invention and the prior art.

See *Graham v. John Deere Co.*, 383 U.S. 1; 86 S. Ct. 684; 15 L. Ed. 2d 545; 148 U.S.P.Q. (BNA) 459 (1966).

The Examiner bears the burden of presenting an unrebutted *prima facie* case of obviousness in order to reject claims under 35 U.S.C. § 103(a). See *In re Deuel*, 51 F.3d 1552, 1557; 34 U.S.P.Q.2D (BNA) 1210 51 F.3d 1552 (Fed. Cir.1995). Thus an applicant on appeal to the Board may overcome the 35 U.S.C. § 103(a) rejection by showing that the Examiner provided insufficient evidence of *prima facie* obviousness.

A proper rejection under the first *Deere* factor, the scope and content of the prior art, requires that there must be some teaching, motivation, or suggestion in the prior art to combine the references at the time the invention was made. See *C.R. Bard,Inc. v. M3 Sys. Inc.*, 157 F.3d 1340, 1351; 48 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 1998) See also *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327; 69 U.S.P.Q.2D (BNA) 1481 (Fed Cir. 2004). Evidence of the motivation, suggestion or teaching to combine the references may be found "in explicit or implicit teachings within the references themselves, from the ordinary knowledge of those skilled in the art, or from the nature of the problem to be solved." *WMS Gaming, Inc. v.*

International Game Tech., 184 F.3d 1339, 1355; 51 U.S.P.Q.2D (BNA) 1385 (Fed. Cir. 1999). The test for an implicit showing is "what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370; 55 U.S.P.Q.2D (BNA) 1313 (Fed. Cir. 2000).

Irrespective of the source of the teaching, suggestion, or motivation, the Examiner must make an objective showing that would lead to the combination of references. See *In re Fine*, 837 F.2d 1071, 1074; 5 U.S.P.Q.2D (BNA) 1596 (Fed. Cir. 1988). See also *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317; 73 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2004). The Examiner must "identify specifically the principle, known to one of ordinary skill, that suggests the claimed combination" at the time the invention was made. *In re Rouffet*, 149 F.3d 1350, 1359; 47 U.S.P.Q.2D (BNA) 1453 (Fed. Cir. 1998). Mere identification of each individual element of the claimed invention in the prior art "without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight." *In re Dembiczak*, 175 F.3d 994, 999; 50 U.S.P.Q.2D (BNA) 1614 (Fed. Cir. 1999). See also *Iron Grip Barbell Co. v. USA Sports, Inc.*, 392 F.3d 1317; 73 U.S.P.Q.2d (BNA) 1225 (Fed. Cir. 2004). It is especially important to adhere to the requirement for a suggestion, motivation, or teaching in the prior art in the case of simple inventions because in such cases the simplicity of the invention may cause one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." See *In re Dembiczak*, 175 F.3d at 999; 50 U.S.P.Q.2D (BNA) at 1620 (quoting *W.L. Gore & Assoc., Inc. v. Garlock, Inc.* 721 F.2d 1540, 1553; 220 U.S.P.Q. (BNA) 303 (Fed. Cir. 1983)). As the Federal Circuit has noted, "simplicity is not inimical to patentability." *In re Oetiker*, 977 F.2d 1443, 1447; 24 U.S.P.Q.2D (BNA) 1443 (Fed. Cir. 1992).

The showing of the motivation, suggestion, or teaching to combine must be "clear and particular," requiring the presentation of factual findings. *In re Dembiczak*, 175 F.3d at 999, 50 U.S.P.Q.2D (BNA) 1614. Such findings must be made even when changes from the prior art are minor or simple. See *In re Chu*, 66 F.3d 292, 298; 36 U.S.P.Q.2D (BNA) 1089 (Fed. Cir. 1995). Broad conclusory statements about the teachings of the references, on their own, are never sufficient to satisfy this requirement. See *In re Dembiczak*, 175 F.3d at 999, 50 U.S.P.Q.2D (BNA) 1614 .

Finally, there can be no suggestion, motivation, or teaching to combine if one reference teaches away from its combination with another reference. See *W.L. Gore & Assoc., Inc. v. Garlock, Inc.* 721 F.2d 1540, 1550; 220 U.S.P.Q. (BNA) 303 (Fed. Cir. 1983). A reference teaches away when:

> "a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant ... [or] if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant."
>
> *In re Gurley*, 27 F.3d 551, 553; 31 U.S.P.Q.2D (BNA) 1130 (Fed. Cir. 1994).

In recognition of the burden upon an examiner to establish a *prima facie* case of obviousness under 35 USC § 103(a), three basic criteria are set forth in the MPEP to guide examiners. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP 2143)

2. The rejection of claim 1 under 35 USC §103(a) is improper because the prior art relied upon by the examiner fails to teach or suggest all claim 1 limitations.

The third criteria of a *prima facie* obviousness rejection, that the prior art reference (or references when combined) must teach or suggest all claim limitations, is not met because the prior art references relied upon by the Examiner do not teach or suggest the final elements of claim 1, "at least two foil strips which are each provided with a printing pattern repeating in a longitudinal direction of the foil strip, characterized in that the foil strips are supplied in a coupled manner from one foil stock."

The Examiner admits that the primary reference relied upon in his 35 USC § 103(a) rejection of claim 1, Pannekeet, WO 99/14121, does not teach or suggest that the foil strips be supplied in a coupled manner from one foil stock. (Final Office Action mailed June 23, 2005, ¶ 3.) On the contrary the prior art Pannekeet reference specifically teaches two separate foil strips

12, 16 provided from two separate sources 11, 15 which may be seen on the left and right sides of the machine illustrated in Fig. 1 of the prior art reference. Pannekeet is the only reference relied upon by the Examiner with respect to the rejection of claim 1 which teaches foil strips at all.

The Examiner relies upon the Kurth reference to teach the final element of Applicant's claim 1. In particular, the Examiner relies upon the following language from Kurth, "for economically manufacturing tubular bags, it is known to slit a sheet of packing material into a plurality of strips of equal width ...prior to forming a tubular bag from the strips" (Kurth, column 1, line 17).

The material being split into separate strips and formed into a bag according to the Kurth reference is unambiguously *the basic material of the bag itself* (the Kurth material is analogous to Applicant's netting material, the first element of claim 1). Nothing in Kurth teaches or suggests the application of exterior foil strips as an overlay to a bag, particularly with each foil strip being provided with a repeating printed pattern and provided in a coupled manner from one foil stock.

Kurth only teaches one of many possible ways to prepare and provide a bag. The examiner admits that Pannekeet does not suggest the final element of claim 1. Since Kurth is entirely silent with respect to the claim 1 element of two foil strips and thus does not teach or suggest the final claim limitations of claim 1, a *prima facie* case of obviousness has not been made with respect to claim 1.

3. The rejection of claim 1 under 35 USC §103(a) is improper because the prior art relied upon by the examiner contains no motivation to combine.

The combined teachings of Pannekeet and Kurth also fail to meet the first criteria of a *prima facie* obviousness rejection. Assuming solely for the purposes of discussing the Examiner's rejection that the Pannekeet and Kurth references do teach each element of claim 1, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine these referenced teachings. The examiner relies upon Pannekeet for the repeating printed pattern limitation on claim 1 and Kurth is relied upon to teach at least two strips supplied in a coupled manner from one foil stock.

To fully appreciate the impropriety of the examiner's combination of the prior art references, it is important to note the reason the final claim limitations define the method of claim 1. The prior art bag preparation machine shown in FIG. 1 of the Pannekeet reference features two separate foil rolls 11, 15. The separate rolls 11, 15 provide separate front and back foil sheets 12, 16 as overlay material which, along with a tube of netting 8, are formed into a bag having foil overlays, "in addition... lettering and the like can be placed on the sheet material" Page 2, line 10. The Pannekeet reference is wholly silent with respect to pre-printed foil images or the image mismatch problem described above and addressed by Applicant. Applicant is an inventor of the prior art Pannekeet reference and recognizes at paragraph 9 of the present application that slight variations in the supplied length of each front and back foil panel applied to a series of bags will eventually result in a lengthwise mismatch between any illustration applied to the front of a bag and any illustration applied to the back of a bag. Certain prior art references not relied upon by the Examiner address this problem by precisely placing each front foil using an optically read index mark and sizing the illustration or text block on the back panel small enough to allow each bag to have at least one complete back image along with other partial back images regardless of where along its length the back foil is attached to the bag.

The foregoing misalignment problem for bags fabricated from a base mesh or net and a printed overlay is the problem addressed and solved by the present invention. By applying two foil strips from one coupled foil stock, a full sized image may be used on the back strip which remains longitudinally matched with the image on the front strip through the point of bonding the foil with the net bag material. The image on the front strip may be precisely placed with an optically read index mark and the unnecessary expense and complexity of a back side indexing system is avoided.

According to the Examiner, the Kurth process of slitting packing material into strips to manufacture a tubular bag suggests the final limitation of Applicant's claim 1. (Final Office Action dated June 23, 2005, ¶ 3.) In particular, the examiner states, "it would have been obvious to one having ordinary skill in the art, at the time Applicant's invention was made, to have modified the Pannekeet method by incorporating the method of slitting a web sheet of packing material into a plurality of strips of equal width for *economically manufacturing tubular bags*" (emphasis added).

The stated goal of the Kurth method is to use as little packing material as possible in the manufacture of tubular bags. The foil strips of Applicant's invention are supplied in a coupled manner from one foil stock in order to address an entirely different problem, the illustration mismatch problem inherent in known methods of supplying foil strips for adherence to bags discussed in detail above. Kurth teaches nothing and provides no motivation with respect to printed foil overlays. Kurth would only motivate one of ordinary skill in the art to modify the manner in which the netting bag material of claim 1 is formed.

As discussed above, the only reference relied upon by the Examiner that provides any teaching with respect to foil overlay panels is Pannekeet. This prior art implicitly teaches away from a combination with Kurth. The Pannekeet reference teaches two separate foil rolls 11, 15. The separate rolls 11, 15 provide separate front and back foil sheets 12, 16. The expressly taught prior art method of providing overlay sheets in an un-coupled manner from separate stock would lead one skilled in the art along a divergent path, underscoring the inappropriateness of the Examiner's obviousness rejection.

In the Federal Circuit opinion of *In re Lee,* 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) the court discusses the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references. The *Lee* opinion is a specific application of the general doctrine that the showing of the motivation, suggestion, or teaching to combine must be "clear and particular," requiring the presentation of factual findings. See *In re Dembiczak* discussed above. Here, the examiner has not made sufficient specific factual findings with respect to the motivation to combine, the level of ordinary skill in the art or other relevant matters. The examiner's entire findings with respect to the critical elements of claim 1 are:

"It would have been obvious to one having ordinary skill in the art, at the time Applicant's invention was made, to have modified the Pannekeet method by incorporating the method of slitting a web sheet of packing material into a plurality of strips of equal width for economically manufacturing tubular bags." (Final Office Action dated June 23, 2005, ¶ 3.)

It is unclear whether the examiner is relying on the second or third of the factors discussed by the Federal Circuit in *Rouffet*. In either case, no specific factual findings are made.

In summary, there is no motivation to combine contained in either applied reference, nor has the Examiner identified a motivation within the knowledge generally available to those skilled in the art. This lack of any motivation to combine is emphasized by two points. First, Kurth teaches the slitting of packaging material strips solely for tubular bag formation. One skilled in the art might be motivated to provide the net bags of the present invention from slit material. Second, the Pannekeet reference teaches away from the provision of, "at least two foil strips which are each provided with a printing pattern repeating in a longitudinal direction of the foil strip, characterized in that the foil strips are supplied in a coupled manner from one foil stock."

C. The Rejection of Claims 2-6 under 35 USC § 103(a)

1. Statement of the relevant law pertaining to 35 USC § 103(a)

Applicant incorporates herein the Statement of the Relevant law Pertaining to 35 USC § 103(a) recited above with respect to claim 1.

2. The rejection of claims 2-6 under 35 USC § 103(a) is improper the examiner has failed to demonstrate the essential elements needed to support a *Prima Facie* rejection of claims 2-6.

Claims 2-6 depend from claim 1 and are allowable for the reasons set forth above. In addition, the Examiner relies upon Antonacci et al., US 5,823,683, as the basis for a rejection under 35 USC § 103(a) of claims 2-6. Antonacci in combination with Kurth and Pannekeet does not teach or suggest each element of claims 2-6.

In addition, Applicant's claim 2 limits the foil stock of claim 1 to " a single strip of foil with at least two repeating printing patterns with concurrent repeats provided next to one another, wherein the single strip is divided into sub-strips each bearing the repeating printing pattern." Thus, when the single strip is divided into substrips, each substrip bears its own repeating, printed pattern. This particular configuration is easily visible in Applicant's FIG. 5

where the repeating R (rear) and repeating F (front) images are shown to repeat side by side along the length of the single foil strip, and where concurrent repeats are provided next to one another.

Contrary to the Examiner's assertion, the print band of Antonacci, as shown in Figs. 1 and 9, has an entirely different configuration. It appears from Fig. 1 that the printed band of Antonacci features two distinct images of fruit. In addition, these two distinct images alternate down the length of the printed strip. Thus, Antonacci does not teach or suggest a printed pattern repeating longitudinally as claimed and as defined in Applicant's specification and figures. Furthermore, Antonacci does not teach or suggest providing concurrent repeats next to one another (side by side) as is shown in FIG. 5. The Antonacci band provides no suggestion or teaching dealing with the mismatch of front and back images as addressed in detail above. Thus, the Examiner's 35 USC § 103(a) rejection of claims 2 is inappropriate.

Claims 3-6 depend from both claims 1 and 2 and are allowable for the reasons set forth above.

VIII. CLAIMS APPENDIX

1. (Original) A method for manufacturing bag packages, wherein netting material of bags to be formed is connected to at least two foil strips which are each provided with a printing pattern repeating in a longitudinal direction of the foil strip, characterized in that the foil strips are supplied in a coupled manner from one foil stock.

2. (Original) The method according to claim 1, wherein the foil strips are obtained from the foil stock comprising a single strip of foil with at least two repeating printing patterns with concurrent repeats provided next to one another, wherein the single strip is divided into sub-strips each bearing the repeating printing pattern.

3. (Original) The method according to claim 2, wherein the single strip is obtained from a stock roll.

4. (Original) The method according to claim 3, wherein the stock roll is unwound by foil webs moving along with the netting material.

5. (Original) The method according to claim 2, wherein at least one of the sub-strips is connected in flat condition to a flat strip of the netting material.

6. (Original) The method according to claim 2, wherein at least one of the sub-strips is connected to a flat strip of the netting material in an overlapping manner across only a part of its width.

7. (Withdrawn) An apparatus for manufacturing bag packages, comprising a first guide for supplying a strip of netting material, a second guide for supplying a web of foil material, a forming element for forming a sleeve with the netting material and the foil material, first welding means for forming a weld running in a transverse direction of the sleeve, second welding means for forming a weld running in a longitudinal direction of the sleeve, filling means for introducing an amount of products into the sleeve, cutting means for separating a bag with introduced products formed between two transverse welds, and a separating device for separating the web of foil material into sub-strips across the width.

8. (Withdrawn) The apparatus of claim 7 further comprising a wound-up strip of foil material with at least two different printing patterns with concurrent repeat, which are applied next to each other in the width direction of the strip, each repeating in the longitudinal direction of the strip.

IX. EVIDENCE APPENDIX

Enclosed please find copies of the following references relied upon by the Examiner as to the grounds of rejection to be reviewed upon appeal:

1. Pannekeet, WO 99/14121.
2. Kurth, U.S. Patent No. 6,658,818.
3. Antonacci, U.S. Patent No. 5,823,683.

X. RELATED PROCEEDINGS APPENDIX

None

XI. CLOSING REMARKS

For the foregoing reasons, Applicant submits that the rejection of claims 1-6 pursuant to 35 USC § 103(a) is improper, and that claims 1-6 are therefore patentable. Accordingly, Applicant respectfully requests that the rejection of the Examiner be reversed.

Enclosed is a check in the amount of $250.00 to cover the fee associated with the filing of this Appeal Brief. The undersigned hereby authorizes the charge of any required fees not included or any deficiency of fees submitted herewith to be charged to deposit account number 19-5117.

Respectfully submitted,

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EVIDENCE APPENDIX

PCT

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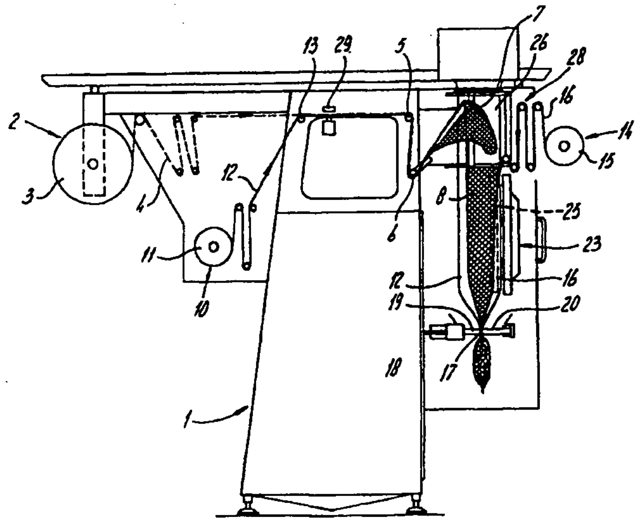
(54) Title: METHOD AND DEVICE FOR MAKING BAGS FROM NET MATERIAL



(57) Abstract

A method for the continuous production of bags from a net material, which bags are filled with products such as fruit, vegetables, potatoes, nuts and the like, comprises the steps of providing a stock – for example a roll – of web–type net material (4), forming therefrom a sleeve with overlapping longitudinal edges, feeding–in a web of sheet material (12) at least at the sides of the sleeve of net material with overlapping longitudinal edges, under the influence of heat and by means of a transversely directed weld, bonding the pack consisting of the web of sheet material and the opposite walls of the sleeve of net material, under the influence of heat and by means of a weld running in the longitudinal direction of the sleeve, bonding the overlapping longitudinal edges of the sleeve and the adjacent web of sheet material, placing a quantity of products in the sleeve (8) of net material, and separating the bag with products from the sleeve (8) of net material.

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METHOD AND DEVICE FOR MAKING BAGS FROM NET MATERIAL

The invention relates to the continuous production of packs from a net material, such as bags in which fruit, vegetables, potatoes, onions and the like are packed.

For the packing of such products it is known to use, as the starting material, a tubular or sleeve-type net material, which is kept ready in compressed form on a mandrel. The tube or sleeve is gradually stripped off the mandrel. The net material is then closed by means of a weld at regular intervals in the longitudinal direction of the tube or sleeve. A desired quantity of products is placed in the tube or sleeve, after which a closed unit is formed by means of a subsequent weld. This unit is cut off the tubular or sleeve-type starting material at the position of the weld, after which the pack is ready.

During the packing, the sleeve-type material can also be enclosed between two webs of sheet material. These webs of sheet material under the influence of heat are welded together with the net material, with the result that a relatively strong weld is obtained. Such a weld is in any case considerably stronger than a weld in the net material itself, which provides a poorer bond. A device for carrying out such a method is known from EP-B-405595.

The disadvantage of this known method lies in the starting material used. As already mentioned, the material concerned is a tubular or sleeve-type material. Although that material is compressed on a mandrel, the total length of the material, and thus the number of packs to be produced, is still quite small. The packing process therefore has to be interrupted relatively frequently in order to provide a new quantity of starting material. Besides, such tubular or sleeve-type starting material is relatively expensive.

The object of the invention is therefore to provide a method for producing a pack of the type described above, but which does not have the limitation of the tubular or sleeve-type starting material used until now.

That object is achieved by means of a method for the continuous production of bags from a net material, which bags are filled with products such as fruit, vegetables, potatoes and the like, comprising the steps of providing a stock - for example a roll - of web-type net material, forming therefrom a sleeve with overlapping longitudinal edges, feeding-in a web of sheet material at least at the side of the sleeve of net material with overlapping longitudinal edges, under the influence of heat and by means of a transversely directed weld, bonding the pack consisting of the web of sheet material and the opposite walls of the sleeve of net material, under the influence of heat and by means of a weld running in the longitudinal direction of the sleeve, bonding the overlapping longitudinal edges of the sleeve and the adjacent web of sheet material, placing a quantity of products in the sleeve of net material, and separating the bag with products from the sleeve of net material.

In the case of the method according to the invention, a roll of web-type net material can be used as the starting material to produce a pack from net material. A great length can be accommodated on such a roll without any problem, sufficient for lengthy, uninterrupted production.

The packs obtained are also very sturdy, in view of the fact that all welded seams, including the longitudinal seam, are reinforced by the sheet material. In addition, as is customary, lettering and the like can be placed on the sheet material.

The method according to the invention preferably comprises feeding-in two webs of sheet material at the opposite sides of the sleeve of net material and, by means of a transversely directed weld, bonding the pack consisting of the two webs of sheet material and the opposite walls of the sleeve of net material.

The pack thus obtained has a web of sheet material both at the front side and at the rear side, both of which can be suitable for printing. In addition, the relatively heavily loaded transverse seams of the pack are then particularly sturdy, in view of the double sheet layers in the transversely directed welds.

In order to ensure a uniform, undisturbed in-feed of the sheet material together with the net material, the method according to the invention comprises bonding, by means of at least one local weld, at least one of the webs of sheet material to the web of net material, in order to ensure that the two run evenly before the sleeve of net material is formed.

Reference is made to the method known from EP-A-696991 (WO-A-942356). According to this known method, bags can be produced continuously from a web-type sheet material by turning said sheet material into the form of a sleeve or tube with overlapping longitudinal edges and then welding said longitudinal edges to each other. In addition, transversely directed welds are made, in order to form individual bags.

The sheet material used in the case of this known method is extremely easy to weld, and this means that welded seams with the desired strength can be obtained. However, this known method is not suitable for the production of packs from net material. The net material is made of a plastic which is not so readily weldable, with the result that any welded seams obtained in this way would soon give way under the influence of the weight of the contents of the pack.

The invention also relates to a device for carrying out the method according to the invention. This device comprises a first guide for feeding-in a web of net material, a shaping element for forming a sleeve with overlapping longitudinal edges from the web of net material fed in, a second guide for feeding-in a web of sheet material at the side of the sleeve where the overlapping longitudinal edges are situated, first welding means for forming a transversely directed weld in the pack consisting of the web of sheet material and the opposite walls of the sleeve of net material, second welding means for forming a weld running in the longitudinal direction in the overlapping longitudinal edges of the sleeve and the adjacent web of sheet material, filling means for placing a quantity of products in the sleeve, and cutting means for separating a bag filled with products from the sleeve.

The device preferably also comprises a third guide for feeding-in a second web of sheet material at the side of the sleeve of net material opposite the side where the overlapping longitudinal edges are situated. By means of such a device, packs in which the net material is provided with a web of sheet material at both sides can be produced. The transversely directed welds of such a pack are consequently extremely sturdy.

A welding station is situated along the guide of the web of sheet material and the net-type web material, for bonding to each other locally said web of sheet material and the net-type web material.

In this embodiment of the device it can be ensured that the web of sheet material in question and the net-type web material cannot shift relative to each other. That is important during the formation of a sleeve or tube from the net material. During that forming step said web of net material is guided over a so-called forming shoulder, which could lead to undesirable shifts of the web of sheet material also being guided over the forming shoulder.

The invention will be explained in greater detail below with reference to an exemplary embodiment shown in the figures.

Figure 1 shows a device for carrying out the method according to the invention.

Figure 2 shows the sleeve and webs of sheet material before the welding.

Figure 3 shows a view in perspective of a net pack according to the invention.

The device shown in Figure 1 comprises a machine frame shown in its entirety by 1, on which machine frame a station 2 having a rotatably suspended roll 3 with web-type net material 4 is situated. By way of a number of rolls, said net material is ultimately fed over rolls 5 and 6 to a so-called shaping shoulder 7.

At the position of said shaping shoulder 7 the web of net material 4 is formed into a sleeve 8 with overlapping longitudinal edges 9, as can be seen in Figure 2.

The frame 1 also has provided on it a station 10 on which a roll 11 with web-type sheet material 12 is accommodated. By way of rolls 5 and 6, said web of sheet material 12 is fed together with the net material 4 to the shaping shoulder 7. Over said shaping shoulder 7 the sheet material 12 reaches the rear side of the sleeve of net material 8.

The sheet material 12 and the net material 4 are combined at roll 13 and guided along a welding station 14, where by means of local welding the two webs are bonded to each other. The advantage of this is that the web of sheet material 12 cannot shift relative to the net material at the position of the shaping shoulder 7, and reaches the correct place at the rear side of the sleeve of net material 8.

A station 29 is also present on the frame 1, which station has a roll 15 with sheet material 16. By way of a number of rolls 28, said sheet material 16 reaches the front side of the sleeve of net material 8.

The position of the two webs of sheet material is also shown diagrammatically in Figure 2.

The sleeve of net material 8 and the webs of sheet material 12, 16 are then welded to each other, in order to form a weld 17 running in the transverse direction. For this purpose, the welding station 18 is used, which welding station has two jaws 19, 20 which apply heat and pressure to the pack composed of the front wall 21 and rear wall 22 of the sleeve 8 of net material, web of sheet material 12 and web of sheet material 16.

By means of a second welding station 23, the longitudinal edges 9 and the web of sheet material 16 are welded to each other. For this purpose, the welding station 23 has a jaw 24 placed outside the sleeve 8, and also a format pipe 25 placed inside the sleeve. Under the influence of the heat and pressure supplied by the jaw 24, the weld 26 running in the longitudinal direction is obtained, as shown in Figure 3.

A desired quantity of products is then placed by way of filling station 26 in the now closed sleeve of net material 8, after which the sleeve material 8, together with the web of sheet material 12 in the meantime bonded thereto by welded seam 17, and the web of sheet material 16 bonded thereto by welded seams 17 and 25, is moved downwards. A second welded seam 17 is then made by means of the jaws 19, 20 above the products placed in the sleeve, after which the pack with the products therein has acquired the shape shown in Figure 3.

A handle for carrying the bag can be made in one web or in both webs of sheet material, if desired.

CLAIMS

1. Method for the continuous production of bags (27) from a net material (4), which bags (27) are filled with products such as fruit, vegetables, potatoes, nuts and the like, comprising the steps of providing a stock - for example a roll (3) - of web-type net material (4), forming therefrom a sleeve (8) with overlapping longitudinal edges (9), feeding-in a web of sheet material (16) at least at the sides of the sleeve (8) of net material with overlapping longitudinal edges (9), under the influence of heat and by means of a transversely directed weld (17), bonding the pack consisting of the web of sheet material (16) and the opposite walls (21, 22) of the sleeve of net material, under the influence of heat and by means of a weld (26) running in the longitudinal direction of the sleeve (8), bonding the overlapping longitudinal edges (9) of the sleeve (8) and the adjacent web of sheet material (16), placing a quantity of products in the sleeve (8) of net material, and separating the bag with products from the sleeve (8) of net material.

2. Method according to Claim 1, comprising making a further transversely directed weld (17) in the pack consisting of the sheet material (16) and the two opposite walls (21, 22) of the sleeve of net material, in such a way that the products placed therein are enclosed between two welds (17), and separating the bag with products from the sleeve of net material at the position of the further transversely directed weld (17).

3. Method according to Claim 1 or 2, comprising feeding-in two webs of sheet material (12, 16) at the opposite sides of the sleeve (8) of net material and, by means of a transversely directed weld (27), bonding the pack consisting of the two webs of sheet material (12, 16) and the opposite walls (21, 22) of the sleeve (8) of net material.

4. Method according to Claim 1, 2 or 3, comprising bonding, by means of at least one local weld, at least one of the webs of sheet material (12) to the web of net material (4), in order to ensure that the two run evenly before the sleeve (8) of net material is formed.

5. Device for carrying out the method according to one of the preceding claims, comprising a first guide (5, 6, 13) for feeding-in a web of net material (4), a shaping element (7) for forming a sleeve (8) with overlapping longitudinal edges (9) from the web of net material (4) fed in, a second guide for feeding-in a web of sheet material (16) at the side of the sleeve (8) where the overlapping longitudinal edges (9) are situated, first welding means (19, 20) for forming a transversely directed weld (17) in the pack consisting of the web of sheet material (16) and the opposite walls (21, 22) of the sleeve (8) of net material, second welding means (24, 25) for forming a weld (26) running in

the longitudinal direction of the overlapping longitudinal edges (9) of the sleeve (8) and the adjacent web of sheet material (16), filling means (26) for placing a quantity of products in the sleeve (8), and cutting means for separating a bag filled with products from the sleeve.

6. Device according to Claim 5, comprising a third guide for feeding-in a second web of sheet material (12) at the side of the sleeve (8) of net material opposite the side where the overlapping longitudinal edges (9) are situated.

7. Device according to Claim 6, in which the guide (5, 6, 13) of one of the webs of sheet material (12) and the guide of the net-type sheet material (4) coincide, in such a way that said web of sheet material (12) and the net material (4) are fed in to the shaping element (7) together.

8. Device according to Claim 7, in which a welding station (14) is situated along the guide (5, 6, 13) of the web of sheet material (12) and the net-type web material (4), for bonding to each other said web of sheet material (12) and the net-type web material (4) locally.

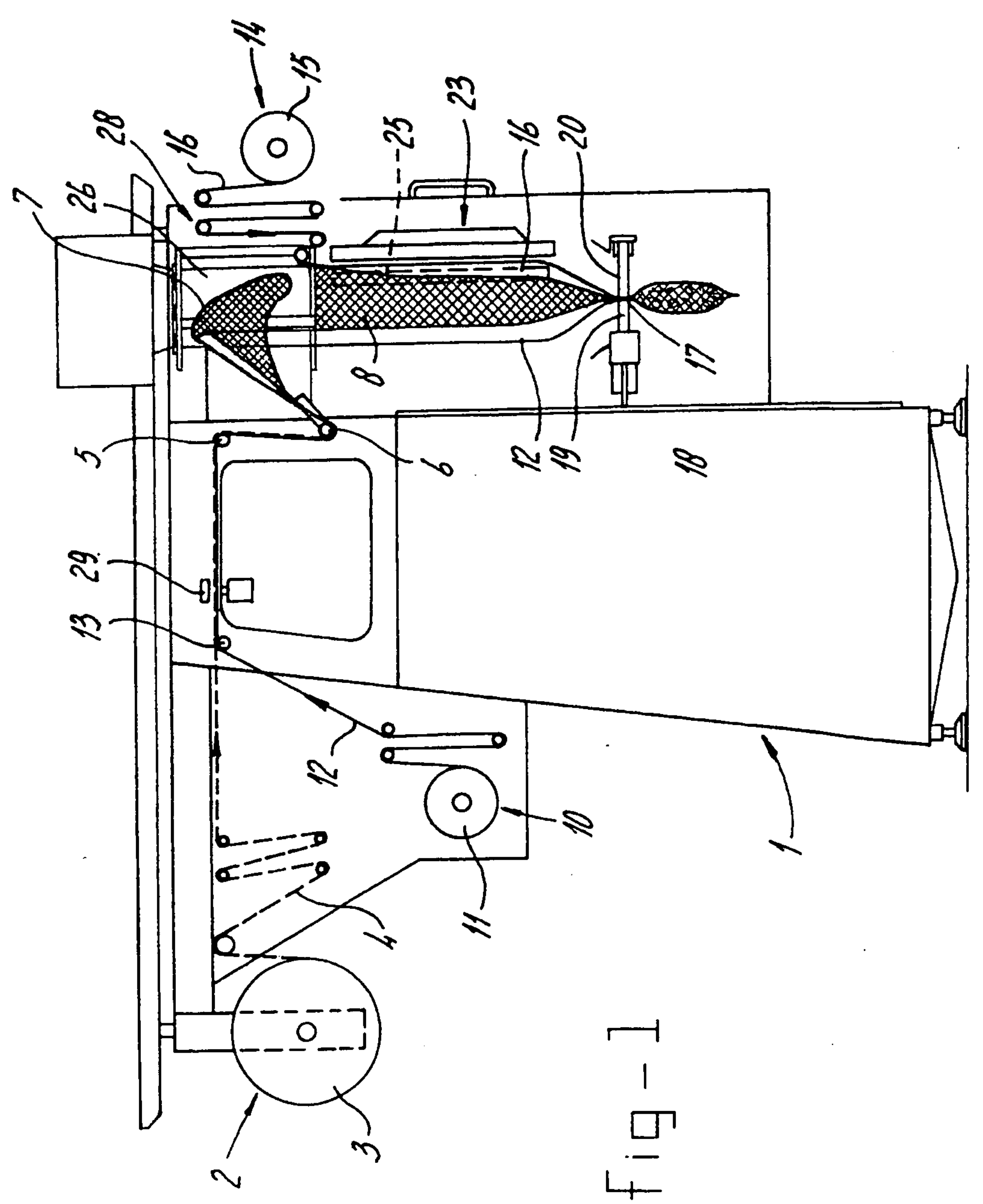


Fig-1

fig-2

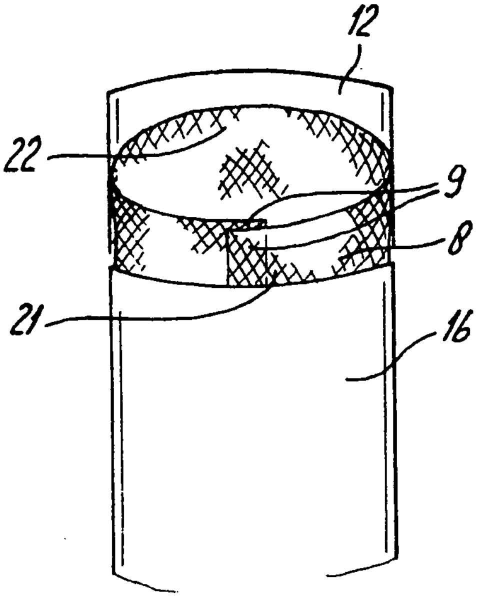
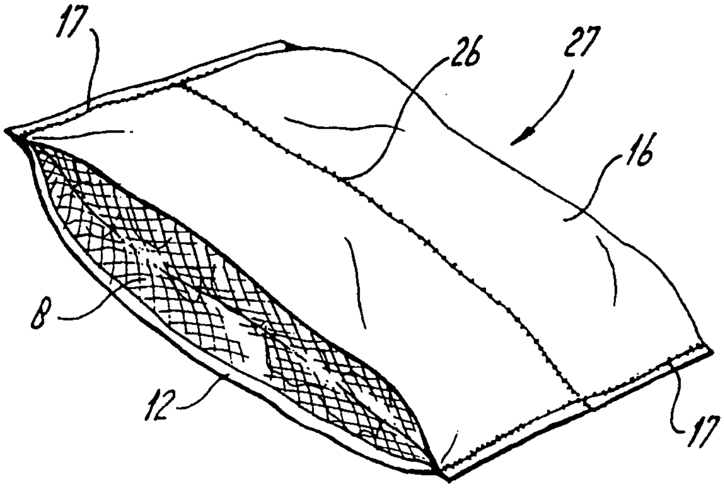


fig-3



INTERNATIONAL SEARCH REPORT

In ational Application No
PCT/NL 98/00527

A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 B65B9/20

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 B65B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	FR 2 319 485 A (ROURE) 25 February 1977 see the whole document ---	1,5
A	DE 10 77 134 B (REINHARDT) 3 March 1960 see the whole document -----	1,5

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

° Special categories of cited documents :

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Date of the actual completion of the international search 30 November 1998	Date of mailing of the international search report 09/12/1998
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Claeys, H

INTERNATIONAL SEARCH REPORT

Information on patent family members

In ıtional Application No
PCT/NL 98/00527

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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DE 1077134 B		NONE	